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# A longitudinal study of Associates at the National Library of Medicine, 1957–1990

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The Associate Program at the National Library of Medicine (NLM) is the oldest postgraduate training program for health sciences librarians in the United States. Despite the program's longevity, few data have been collected about the educational background or subsequent careers of the NLM Associates. This article describes one such study. When the study was conducted in 1990, 130 Associates had participated in the program since its inception in 1957. This report characterizes the age, gender, and educational background of the group as they entered the Associate Program and describes their subsequent employment and geographic distribution. The large number of Associates who have worked in health sciences libraries since completing the program indicates how much these individuals have contributed to NLM and the field of health sciences librarianship, and it also illustrates the value of the Associate Program in recruiting recent library graduates to the profession.

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## INTRODUCTION

The Associate Program at the National Library of Medicine (NLM) is the oldest postgraduate training program for health sciences librarians in the United States. It began as the NLM Internship Program in 1957 and was designed principally as a national program for recruiting new library school graduates into the health sciences library profession. Participants completed rotating work assignments in all major departments of NLM during their internship year. Eighteen interns graduated from this program during the period 1957–1963.

The Internship Program was suspended in 1964/65 and was restructured to reflect the changes and technological innovations being implemented in libraries and information systems at that time. The program resumed in 1966 as the NLM Associate Program and continues to the present day. A more detailed discussion of the Associate Program's history may be found in a report by Louise Darling [1]. The format of the program now includes a six-month curriculum phase covering all aspects of NLM and a six-month project phase during which the Associates complete individual projects in a chosen area.

In general, studies in the published literature on postgraduate health sciences library internships have

described the format and purpose of a particular program [2–5]. In 1967, Martin described the results of a questionnaire sent to former health sciences library interns, including some NLM Associates [6]. Several years later, he reported on the results of a postgraduate training program for science librarians at the University of Tennessee [7]. These studies also provide some anecdotal information concerning what participants learned from their experience and the value of the program to them in their subsequent careers.

In these previous reports, however, the interns were not examined as a group, nor were the follow-up, recruitment, and retention of the interns discussed in such a way as to allow anything more than a general comparison between that group and the NLM Associates. As a result, there is little outside data available against which to compare the NLM Associate Program. The present study is unique in that it focuses on the participants in an internship program over time and characterizes the changes over the duration of the program.

Although the NLM Associate Program has been in existence for more than thirty-five years, few studies have been conducted on the program or its graduates. The 1979 Darling report evaluated the goals and curriculum of the program and summarized the opinions

of the then-current and former NLM Associates as to the content of the program and its value to their careers [8]. There has been no subsequent study of the Associates or their educational backgrounds nor has there been any effort to determine whether the program has been successful in recruiting NLM Associates into health sciences librarianship.

To supplement what little history has been written about the NLM Associate Program and its participants, the author conducted the present study as an NLM Associate project in 1989/90. The purpose of the project was to characterize the age, gender, and educational background of the members of the group as they entered the program, describe their subsequent and current employment, and provide an indication of their contribution to NLM and the field of health sciences librarianship. Because the study was designed to characterize the Associates and not to evaluate the program, no attempt was made to track career paths, determine minority participation, or collect opinions from the Associates as to the value of the program to their professional careers.

For the purposes of this study, an "Associate" was defined as anyone who was selected for and formally participated in all or part of the program. As of August 1990, a total of 130 Associates, including 5 employees recruited from the NLM staff and 1 international Associate from India, had completed the program. All participants completed at least six months of the program.

## METHODOLOGY

The purpose of the study was to answer the following questions.

- Who are the Associates (age and gender, undergraduate educational background, library school attended)?
- Where did the Associates go after finishing the program (geographic location of first position, type of position, type of library, number employed in health sciences libraries)?
- How many of the Associates worked at NLM (total number of Associates employed, duration of employment at NLM)?
- Where are the Associates now (current geographic location, current occupation, number employed in health sciences libraries)?

Among the sources used in obtaining information for the study were the Associate archives, located in the NLM History of Medicine Division, and publications such as *National Library of Medicine News* [9] and the annual *NLM Programs and Services* fiscal reports [10]. Professional library directories were used to locate participants and obtain current addresses. The author also consulted Associates employed at NLM or in the Washington, D.C., metropolitan area,

as well as NLM staff and former Associate Program coordinators. Alumni associations at undergraduate, graduate, and library schools and previous employers and co-workers also were contacted for assistance in locating Associates.

Rather than relying solely on historical and anecdotal information, an attempt was made to contact all Associates directly to confirm background information and educational experience. Associates were queried as to the type and location of their first employment after the program, and their current status and geographic location. Address and occupational information was used to compile a directory of the NLM Associates.

## RESULTS

One hundred thirty people had participated in the Associate Program as of August 1990. Of those, one hundred twenty-one (93%) were contacted directly to verify their background information and current occupation. After unsuccessful attempts to reach them by telephone, three others were sent written correspondence explaining the purpose of the project and requesting background and employment information. One response was received. Of the six remaining Associates, one was deceased, and five could not be located. In general, results are reported for those contacted; however, some background information was available for the others as well. Therefore, the size of the sample varied slightly depending on the variable under scrutiny.

### Who are the Associates?

**Age and gender.** The Associate group consisted of ninety-nine women and thirty-one men, a gender ratio of approximately 3:1. This ratio is comparable to published survey results that indicate that women make up between 73% and 84% of library school graduates [11-15]. Women also dominate the health sciences library profession; 86% of the 1990 Medical Library Association members were female [16].

Associates ranged in age from 21 to 42, with an average age of 27.9 years. Men were slightly older in average age (29.2 years) than were women (27.5 years). Since the program began in 1957, the median age of the Associate class has increased from 25.6 to 29.6 years. The length of time between completion of undergraduate education and graduation from library school also has increased. Although 78% of the Associates came to NLM directly from library school, the average time between undergraduate and library degrees increased from two to six years between 1957 and 1990. A number of recent library graduates were pursuing librarianship as a second career, resulting in an older library school population. White and

**Table 1**  
Geographic profile of Associates: location of library school attended, employment after Associate Program, and current location

	Northeast	South	Midwest	West	International	Total
Library school attended	37	28	43	21	1	130
First employment after Associate Program	8	96	9	11	1	125
Current location	15	72	17	17	3	124

Macklin reported that two thirds of the students in their study had worked in another field before attending library school [17].

**Educational background.** Associates had pursued a wide variety of undergraduate subject majors. Humanities (27%) and social science (24%) disciplines made up the majority, with fifteen different subject majors represented in these two categories. Twenty-one percent of the Associates had completed double majors. Thirty-nine percent of the Associates had an undergraduate major in the sciences, with more than 90% of those in disciplines related to the life sciences. By comparison, fewer than 10% of library school graduates in published surveys had undergraduate science majors [18–22]. The technical nature of health sciences librarianship tends to attract people with scientific backgrounds; hence the higher percentage of science majors represented in the Associates' group as compared to the general library school population.

In addition, 20% (twenty-five) of the Associates entered the program with advanced degrees other than their library degree; this group included 27% of the men and 18% of the women. Ten of those advanced degrees were in a science-related discipline.

**Library schools.** The NLM Associate Program is a national program, recruiting recent library school graduates from all over the United States. In 1968/69, the program was expanded to include an international Associate from India. Table 1 shows the wide geographic distribution of the library schools attended by the Associates. The U.S. geographic regions representing the Northeast, South, Midwest, and West are those used by the U.S. Bureau of the Census [23].

Seven library schools have produced more than 5 Associates: Illinois (11); Columbia, Indiana, and Michigan (9 each); Maryland (7); and Pittsburgh and Wisconsin–Madison (6 each). Graduates of these seven schools represented 44% of the total Associate group. Thirty-one library schools made up the remaining 56%.

### Where did the Associates go after finishing the program?

Table 1 shows the geographic distribution of the Associates' first positions after the program. Seventy-

seven percent (94) found their first professional library position in the Southern geographic area, primarily in Washington, D.C., and the surrounding metropolitan area. The remaining Associates were distributed evenly among the Northeastern, Midwestern, and Western regions of the United States. The international Associate returned to his native country after completing the program.

Of the 125 Associates for whom employment data were available, 97% (121) found their first position in a library setting. Eighty-seven percent (108) of those were employed in health sciences libraries. Table 2 shows the distribution of the Associates in different types of health sciences libraries.

Fifty-four percent (67) of the Associates stayed on at NLM immediately after completing the program. The Technical Services Division employed the greatest number of Associates (31), followed by the Bibliographic Services (12) and Public Services (11) Divisions. The remaining 7 Associates were employed in other divisions of NLM.

Of the fifty-four Associates who found employment in libraries other than NLM, 59% worked primarily in public services positions. Nineteen percent were employed in technical services positions, and another 22% worked as systems librarians or in some type of administrative capacity. The vast majority of these positions were in an academic setting, with only a few employed in hospital or federal health sciences libraries.

### How many Associates worked at NLM?

Fifty-four percent (70) of the Associates have been employed at NLM, 67 of those in their first position

**Table 2**  
Number of Associates employed in the various types of health sciences libraries

Type of health sciences library	First position	Position in August 1990
NLM	67	26
Academic	32	23
Government	4	10
Hospital	3	4
Private	2	4
Total	108	67

**Table 3**

Number of Associates employed by NLM and the total number of employment years at NLM as of August 1990

Years at NLM	No.	Total person years*
1-5	29	63
6-10	20	160
11-15	6	73
16-20	5	85
21-25	4	87
>25	2	52
Total	66	520

\* "Total person years" represents the number of employees multiplied by the number of years worked.

immediately after the program. Seven Associates who stayed at NLM after completing the program subsequently left to work elsewhere for three to fifteen years and then returned to NLM. Table 3 shows the total number of Associates who have worked at NLM at one time or another and the total number of employment years as of August 1990.

The average length of time Associates had been employed at NLM was 7.9 years; the longest time any individual was employed was 26 years. Information on employment duration at NLM was obtained for 66 of the 70 Associates who worked there.

Data were not available reflecting the recruitment and retention of other internship programs, such as the one at the Library of Congress. For NLM, however, the Associate Program has been a significant source of new employees, many of whom continue their professional careers at NLM.

#### Where are the Associates now?

The current geographical distribution of the Associates is shown in Table 1. Forty-five percent were employed in Maryland and the Washington, D.C., area in August 1990. There had been some dispersal to other regions of the country since the Associates took their first jobs, and the number of Associates working in other countries had increased from one to three. Eighty percent were still working in the library profession. A number of these Associates were employed in information-related positions not affiliated with a formal library organization; they were considered part of the library profession for the purposes of this study. These positions included systems and database managers, program analysts, and independent information consultants.

The current status of the Associates is shown in Table 4. Nearly half of the Associates were employed at NLM or in academic libraries. The number of Associates employed in other areas of government and

**Table 4**

Status of the NLM Associates as of August 1990

Status	No. (%)
Academic library	38 (29)
NLM	26 (20)
Private sector	24 (18)
Other government	16 (12)
Retired	4 (3)
Physician/lawyer	3 (2)
Graduate student	2 (2)
Public library	2 (2)
Deceased	1 (1)
Other	8 (6)
Unknown	6 (5)
Total	130 (100)

the private sector had increased slightly since they took their first positions after the program. Two Associates were enrolled in graduate school, and nine others had gone on to earn advanced degrees—five at the master's level and four at the doctoral level. Two Associates completed law school, and one graduated from medical school. The "Other" category included a variety of activities, such as self-employment, job transition, and the rearing of children.

#### CONCLUSIONS

This study demonstrates the value of the NLM Associate Program for recruitment to and retention in the field of health sciences librarianship. For NLM, the program has been a significant source of new employees over the years, including many who stayed on to continue their careers at NLM. Information on the value of other internship programs for recruitment and retention was not available as a benchmark for comparison. However, the number of Associates employed in health sciences libraries after completing the program, both at NLM and other institutions, as well as the number of Associates still working in the profession illustrate the consistent and continued success of the NLM Associate Program.

These results justify the continued support and funding of the Associate Program and will help NLM promote the program to potential applicants, library schools, and other institutions interested in successful postgraduate, internship, and training programs for librarians.

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